

Abstract

A system and method for scanning for an object within a region using a conformal scanning scheme. The system may comprise a computer which includes a CPU and a memory medium which is operable to store one or more programs executable by the CPU to perform the method. The method may: 1) determine the characteristic geometry of the region; 2) generate a conformal scanning curve based on the characteristic geometry of the region by performing a conformal mapping between the characteristic geometry and a first scanning curve to generate the conformal scanning curve, i.e., mapping points of the first scanning curve to the characteristic geometry of the region; and 3) scan the region using the conformal scanning curve. These measurements of the region produce data indicative of one or more characteristics of the object. The method may also generate output indicating the one or more characteristics of the object.

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